INTERNATIONAL REGULATIONS OF THE FISH-ERIES ON THE HIGH SEAS * * * * *

From BULLETIN OF THE BUREAU OF FISHERIES, Volume XXVIII, 1908

Proceedings of the Fourth International Fishery Congress : Washington, 1908







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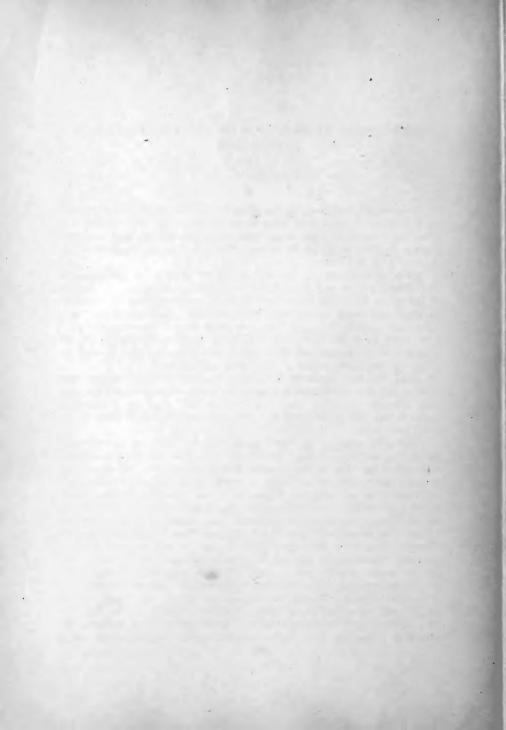
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INTERNATIONAL REGULATIONS OF THE FISHERIES ON THE HIGH SEAS

By O. T. Olsen, D. Sc., F. L. S.

WITH DISCUSSION

Paper presented before the Fourth International Fishery Congress, held at Washington, U. S. A., September 22 to 26, 1908



INTERNATIONAL REGULATIONS OF THE FISHERIES ON THE HIGH SEAS.

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By O. T. OLSEN, D. Sc., F. L. S.

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To attempt a history of the fisheries on the high seas would be like attempting to bail out the ocean or to name all the inhabitants in the vast deep. It is well known to all here that there are no greater flow and ebb in any industry or commerce than in that of the fisheries. Many fortunes have been made and as many have been lost.

God, the great Creator, has very bountifully provided for his creatures, both on land and sea, and given to man the cunning of entrapping the denizens of the seas as food. As populations increased so the demand for fish food increased, accordingly markets were established and both catchers and venders reaped great harvests. It was soon found that to keep markets supplied larger vessels had to be built to go farther afield for fish, and indeed the fishermen did not confine themselves to their own coasts, but they invaded the shores of other nations, which led to dispute and legislation.

Many acts were passed by the various governments to regulate the fisheries of their own coasts, but nothing of an international character has ever been attempted which has worked more satisfactorily than the international convention of 1882 in the North Sea, although there are improvements to be made even in this.

Territorial waters or sea fishery limits have for many centuries occupied the minds of maritime nations. As far back as 1200 King John claimed dominion over the British seas, so did Edward I and Edward II. The sovereignty included many rights and privileges, of which fishing was one, but foreigners were allowed to fish along the British coasts. In 1295 King Edward I commanded the authorities at Yarmouth to treat foreign fishermen in a friendly and kind spirit while fishing off Yarmouth, and freedom of fishing in the seas was embodied in various treaties between England, France, Spain, Portugal, and Flanders. In 1493 the Pope issued a bull dividing the seas between Spain and Portugal. Spain became ruler over the Pacific and the Gulf of Mexico, while Portugal reigned over the Atlantic south of Morocco and over the Indian Ocean.

During the reign of Elizabeth most of the seas were claimed by one nation or another. Denmark claimed the seas between Norway and Iceland, as well as the Sound, the Belts, and the Baltic. England claimed the English Channel, Bay of Biscay, and the seas westward of Ireland and north of Scotland; also the whole North Sea. These claims included the rights of fishing, and led to

frequent international disputes. The British fisheries declined, and the Dutch increased, and eventually the British assailed the Dutch for fishing off the British coast, and proclaimed the exclusive fishing rights in the British seas. In 1600 King James issued a proclamation forbidding foreigners from fishing on any British coasts unless they had first obtained licenses to do so. proclamation was renewed by Charles I in 1636. Time and space will not permit of any further reference to the history of territorial limits. The North Sea convention of 1882 decided the present 3-mile limit. This international law has worked well, although a 4-mile limit would have given greater satisfaction to some nations. It has to be remembered that the English mile is not a standard in all countries. For instance, 4 English miles are equal to a Norwegian mile, to a Danish mile, and to a Swedish mile, so that at present the restricted waters are a portion of a mile in each of those countries, and in their case the distance is taken as one minute of a degree. Both Norway and Sweden would have become parties to the convention had the 4-mile limit been accepted, and there are other reasons favorable to that distance. In the first place such a limit would have been as easily ascertainable as the 3-mile limit; it would have given an additional mile round the land for the development of the fry, which are generally found in shallow water, and it would secure to the local fisherman another mile of fishing water. This 4-mile limit would also have served the purpose of customs limitations for contraband, for boarding by cruisers, etc. A governing power on the high seas is absolutely essential, and such a tribunal should be international. The North Sea convention will serve as a criterion.

If the limits could be extended so as to apply to all nations the result would be very beneficial. The lettering and numbering of fishing vessels which is insisted upon has proved a very wise precaution, and fishing vessels are given their due exemption from pilotage, and the rules of the road regarding them are defined. The letters and numbers served the purpose with the sailing vessels, when they were painted on the sails as well as on the hull of the vessel. Now that the steam trawler predominates, the numbers and letters are placed on the bows, and in some cases on the funnels.

The number of steam trawlers to the end of 1907, published by the Board of Agriculture and Fisheries, July, 1908, is as follows:

Belgium	22
Denmark	5
France	224
Germany	239
Netherlands	81
Norway	20
Portugal	
Spain	
Sweden	
England and Wales	
Scotland	292
Ireland	
Total	2 240

Besides these steamers there are in Norway, Sweden, Denmark, and Iceland a multitude of motor boats for fishing along the shore.

The police or superintendence and protection of fisheries by cruisers has been more or less successful, and it would be well to reconsider carefully the duties and the administration of the power invested in the commanders and officers of the cruisers, as well as the magistrates who have to mete out penalties for infractions of the law. This also is a matter for an international fisheries society to deliberate on. "Regulations for Maintaining Good Order Among the Fisheries at Sea," April 6, 1889, has had only a limited effect, as it is practically embodied in the sea fisheries acts of 1882, but, on the other hand, the North Sea fisheries act, 1893, respecting the liquor traffic in the North Sea, has been a great blessing and a boon both to the owners of fishing vessels and to the fishermen themselves. It has practically annihilated the "cooper," with spirituous liquors and tobacco, and the tobacco has been transferred to the mission ships belonging to the Royal National Mission to Deep Sea Fishermen, from which tobacco can be bought for 1 shilling per pound, equally as cheap as from the "cooper."

The one unfortunate result which has arisen in contravention to the international convention of 1882 came from a desire to close the Moray Firth against all steam trawling, the plea being that this piece of water was the spawning ground for flatfish. In reality there was another feeling emanating from the fishermen who carried on long-line fishing in the Firth of Forth, and those fishermen made representations to the Fishery Board for Scotland to stop this trawling in the Firth. This board accordingly passed a by-law prohibiting trawling. Power was sought and obtained from the British Government and it became a statute. The English trawlers were seized in the Firth, skippers arrested, fish confiscated, and trawling gear removed from the vessels. The owners were heavily fined, but the foreign trawlers insisted upon their rights to fish when outside the 3-mile limit and inside the imaginary line drawn from point to point, a distance of over 70 miles, instead of the 10-mile bay. When it became known that the foreign trawlers could carry on their operations under the protection of the international agreement or convention, the English began to register their ships under foreign flags. There are to-day 35 steam trawlers sailing under the Norwegian flag out of Grimsby, practically owned by Englishmen and worked by them for the sole purpose of trawling in the Moray Firth. This action has caused much enmity between the Scotch fishermen, as well as the Fishery Board for Scotland, and the English trawlers under the Norwegian flag. Of course. English trawlers should observe the fishing rights of the long-line fishermen and also those of the drifters as well as the preserved ground or waters for scientific purposes; but, on the other hand, the Fishery Board for Scotland had no legal right to encroach upon the North Sea outside of the teritorial limits, which is under the common jurisdiction of the high contracting parties and this tribunal

was not consulted. This matter is not settled yet. This is also a case for an international society to settle by arbitration free from political bias.

At the International Fisheries Exhibition, London, in 1883, a statement was made by our much esteemed and lamented friend, Prof. Brown Goode, of the United States Fisheries Bureau. He said: "As long ago as the year 1600, within forty years of the settlement in New England, there were records of the colonists seining the mackerel off Cape Cod by moonlight; and it was somewhat remarkable that on this fishery was founded the system of public schools in the United States, for within ten or twenty years of that time the first public school was founded on a tax upon the fishery." It is not my intention to touch upon the American fisheries; it would be presumptuous to do more than eulogize the rapid progress and the enormous success accruing from the excellent management and regulations in the vast territory of that part of our globe. Such men as my friends Capt. J. W. Collins and Prof. Brown Goode, whom I have already named, have done much for the American fisheries and have enriched all other nations by their original research and publications. Their names will live when many of us have finished our careers.

Note.—Appended to Mr. Olsen's remarks were reprints of the following documents as published in his Fishermen's Nautical Almanac:

Digest of the Merchant Shipping Act, 1894 (57 and 58 Vict., ch. 60). North Sea Fisheries Act, 1893. Extract from the Sea Fisheries Act, 1883.

DISCUSSION.

Mr. Charles E. Fryer. Mr. President, ladies, and gentlemen, I am sure we are much obliged to Mr. Olsen for the paper he has read. It has occurred to me, in the course of the reading of it, that it might possibly be a little local in its character, and refer too much to matters in which we on the other side of the Atlantic are more interested than you who are separated from us by so many miles of deep and, as I know to the full within the last few days, tempestuous water.

The question of the international regulation of the fisheries on the high seas involves, I need hardly say, many very wide considerations. The first point to determine, no doubt, is whether it is the fish and the methods of catching them that you wish to take into account, or whether it is the more immediate interests of those who go in pursuit

of the fish, namely, the fishermen.

Where the fisheries are conducted over such enormous areas as the ocean, and not merely in the limited waters of rivers and estuaries, it almost follows that any steps that may be suggested for the protection of the fish must be both less necessary and more difficult to put into operation than any steps that may be taken for the protection of the fishermen; and I submit that so far as the high seas are concerned—and the title of the paper rather limits us to the high seas—the possibility of any international regulation is very much greater when we come to deal with such questions as the protection of life, and the maintenance of law and order among the fishermen, than when

we come to consider the possibility of protecting the fish themselves.

The fisheries carried on in the high seas are to a large extent concerned with fish of whose habits we know very little. Notwithstanding all that has been done here in this great country—probably more than in the rest of the world put together—we still find that we are exceedingly ignorant of the minutiæ of the habits and of the habitat of the fish which constitute the great harvest of the sea. The more we know, the more I think we find we need to know, and there is an enormous field of research to be exploited before we can decide whether any protective measures should be adopted for the furtherance of the fisheries carried on in the high seas, more particularly with reference to those fish which are classed as pelagic rather than those which are more local in their habits. The first consideration, therefore, would be to decide upon a method of investigation; and, if I may take a leaf out of Mr. Olsen's book and refer somewhat to what is taking place in western Europe, I may perhaps find a wider illustration of what is sought than can be found on this side of the Atlantic. You here in the United States are in the happy position of having very few neighbors-so far, at any rate, as the flag goes-to deal with. On the other side of the Atlantic we have a large number of nations-separate nations-each under its own separate government, interested in the fisheries in a relatively small portion of the sea, and it has become a much more important question with us to consider whether anything can be done for the protection and development of the fisheries—the fish themselves—than can be the case, or, at any rate, than has hitherto been found to be the case, in this country. For I am afraid to say how many centuries the British statute book alone has been filled with enactments, first for the promotion of the fisheries, and then for the protection of them; and the protection of them in the double sense of the word, with a big "P"the protection of them against the foreigner; and with a small "p"—the protection of them against the depredations of what are held to be detrimental modes of fishing. For centuries we have been putting laws on the statute book, and we have been equally ready to wipe them out. We have found that we have made regulations in many casesin most cases—without sufficient information; and then, having made regulations, we have had to set to work to a very much larger extent to find out whether they are justified by the facts before us. But in recent years we have been somewhat altering our methods, and there is now established, as regards the principal powers of western Europe who are interested in the fisheries of the North Sea, the German Ocean, an international council for the study of the sea. That council started with a very large programme of research, involving many matters, which those who are interested in fisheries know are concerned with fishery development, and which influence the movements of fish, such as temperatures, currents, depths, salinity, and generally what is summed up in the word "oceanography." But, while all these matters are necessarily involved in the great question of fishing and fisheries, they are not necessarily essential to the study of some of the more important problems that we have to deal with, and the international council which has been established with regard to the North Sea is finding that it has to limit its programme and to take up some of the more pressing and urgent questions, rather than to deal with the study of fish and fisheries of the ocean at large. And I should like very much if, in what I am saving, I could lead some gentleman on this side to tell us how far individual cases of urgent necessity have arisen where particular fisheries seem to require protection as contrasted with the wider study of the general questions of biology and of the metabolism of the sea generally

Having decided whether it is the fish or the fishermen that most require protection, it is for the states concerned in any fisheries which are common to them, as they necessarily are on the high seas beyond the territorial limits, to make up their minds as to the extent to which any regulations are needed and as to the direction which they should

take.

It may possibly be of interest to you here if I point out that, so far as any international regulations on the other side of the Atlantic are concerned, in which England-the United Kingdom—at any rate, is interested, there is none which deals directly with the protection of the fish. The regulations deal with the protection of the fishermen; sometimes protection of the fishermen against themselves; sometimes the protection of the fishermen against the elements; sometimes against undue competition, competition carried to the extent of what are commonly, or have in the past, been known as "outrages" committed on the persons and on the property of competing fishermen. Our international regulations have been directed to putting down abuses of that kind and to establishing a system of international marine police which, on the one hand, should protect the territorial limits, but which is mainly established for the purpose of protecting the fishermen and preventing such "lewd outrages" as Mr. Olsen referred to, such undesirable practices as took place when the class of men known as the "coopers," of whom you have heard, practically had the high seas to themselves and carried on a most undesirable traffic in intoxicating liquors, leading to very serious outrages, and, in many cases, to disaster. That has been entirely put down. The moment that these practices were recognized, the several nations interested agreed at once, without any demur, to establish a system of police and a method of license by which the traffic in intoxicating liquors among fishermen on the high seas, at any rate in that part of the sea which was particularly infested by these men, should be controlled.

Then, as another instance of undesirable practices, is what you, I believe, on the United States coast know as the trawler, here practically unknown—that is to say, the trawler who fishes with a net drawn along the bottom of the sea. I believe I am right

in assuming that by the trawl on this side is commonly meant the long line?

The President. Yes.

Mr. Fryer. But on the other side of the Atlantic the practice of trawling by nets whose mouths are held open by one or two very ingenious devices and which are drawn along the bottom—at or near the bottom—of the sea, is a practice which is extending enormously. I am told that one or two experiments have been made on the Nova Scotian coast, and I hear that it is proposed to send over some of these vessels to the banks on this side—the Newfoundland banks in particular—with a view to seeing

whether that industry can be established on this side. Thus you may possibly have in a very short time to deal with difficulties such as we have had to deal with, namely, the interference caused by a method of fishing, such as the trawl, with older-established methods, such as the long line, or what you know as the "bultow" or with the "drift net."

When steam was introduced as a means of propulsion of trawling vessels, it became very much more easy for the trawler to force its way through the drift nets, or to sweep up the long lines, than when a vessel was propelled merely by sail. And a very reprehensible practice was adopted by a certain number of fishermen who actually carried with them to sea cutting grapnels, which enabled them to cut into the nets with which they came in contact, and very great damage was done by one class of fishermen to another class in this way. This is an illustration of the protection of fishermen against their colleagues. Now, as soon as this practice was brought to the notice of the powers interested, in the North Sea fisheries especially, they again entered into an international agreement to put this practice down, and heavy penalties were imposed upon the possession of the instrument in question, which was known by the somewhat significant title of "devil." The devil has been abolished, in that shape at any event, from the North Sea.

I do not know whether I am passing the time limit or not.

The President. Just a minute or two more.

Mr. FRYER. One other matter in which it is possible to protect the fishermen is with respect to the outfit of the vessels, and the prevention of collisions at sea, and in things of that sort, which also have become the subject of international regulation. In such questions as the carrying of lights for particular purposes, not only the nations of western Europe but practically all the nations of the world have agreed to an international code, which I think I may refer to fairly as an illustration of the link which exists among all nations in the waters of the high seas in which the great fisheries are prosecuted.

I should like to enlarge upon the idea which suggests itself as soon as we begin to speak of the ocean as a link. We speak of it commonly as a means of division between nations, but I think that the suggestion may be maintained that the water is rather a connecting link. It is much more a connecting link than it is a means of dividing of the nations. In this room we have an illustration of the fact that the subject of fish, and the element in which the fisheries are conducted, has led to the bringing together of a large body of gentlemen from all parts of the world; and if the question of the international regulation for fisheries on the high seas can lead, as I hope it may in the future, to more harmonious and fraternal relations among the nations of the earth, we shall be entering upon quite a different era from that of the past, when the question of fisheries was a question sometimes nearly, if not actually, of war, and led at any rate to anything but fraternal relations. But I think the longer we study and the more we know of these matters, the more we regard them from the point of view not of our own local interests, but as interests uniting nation to nation, the better it will be, not only for the fishers themselves, but for the general welfare of those nations who are so largely interested in them in common. [Applause.]

Dr. B. W. Evermann (U. S. Bureau of Fisheries). Ladies and gentlemen of the congress, this matter of the international control of the fisheries on the high seas suggests to me that it might be worth while for a word to be said regarding a step which the Governments of Great Britain and the United States have recently taken looking to the control of the fisheries in international waters. As you are doubtless aware, the fisheries in the international waters between the United States and Canada are of great importance. There are a number of important lakes—four of the Great Lakes, and smaller lakes connected with them—the St. Lawrence River and those other waters to the eastward; and then of equal or even greater importance are the fisheries on the west coast, those in the Puget Sound and Fraser River region. The fisheries in those international waters

have been administered by the respective States on this side of the line and by the Provinces on the other side, in some cases jointly by the Provinces and the Dominion Government.

Lake Eric may be taken as an illustration. On the American side are the States of New York, Pennsylvania, Ohio, and Michigan; on the other side the Province of Each of those governments has exercised control over a certain portion of The laws or statutes in no two of those States or provinces have been uniform. As a result, interminable and very irritating conflicts arise every year. Because of that situation, recently the United States and Great Britain entered into a treaty, the terms of which provided for the appointment of an international fisheries commission to look over the ground, to find out what the local conditions are, and to recommend to the respective governments proper statutes which would regulate in a proper way the fisheries of these international waters. The treaty named specifically the waters which were to be considered by this joint commission. The treaty also provided that this international fisheries commission should write the statutes, define what should be the terms under which fishing may be carried on in these various waters, and that they should submit their report to the respective governments not later than the 31st of December next. Then it is understood that the statutes written by that commission will be promulgated by the respective governments and the necessary steps taken for the enforcement of the regulations agreed upon.

The short time that was allowed the commission to consider these matters was embarrassing, of course. To allow them only until the 31st of December seemed a very short time; at first blush it seemed that it was almost useless to attempt to do anything, but the commission entered upon its investigations at Eastport, Me., the 7th of July. After a few days the situation cleared up very materially. I may say that the commission took as the basis from which to work the most admirable report made by the Rathbun-Wakeham commission of 1892-1896. Those two gentlemen, as high joint commissioners, representing the two governments, Canada and the United States, went over the ground during each of four years and made a very thorough and very sane report as to the conditions, and then closed their consideration of each of the international waters with a statement embodying what they thought were the proper recommendations necessary to be carried out for the proper regulation of the fisheries of that particular body of water. Using that as a basis, the present international commission was able to make much more rapid progress and to understand the situation much more readily and much more thoroughly than at first seemed possible. After interviewing a few hundred fishermen it was easy to tell what the next fisherman would say, so that the matter became simple. I may say, simply, that this international commission, consisting of David Starr Jordan, of Stanford University, California, and Samuel T. Bastedo, of Canada, with myself as associate, went over the entire boundary, visiting all of the important fisheries, and the commission is now writing its statutes and will have its report ready for the respective governments by the end of December.

What I want to call to your attention particularly is this: Practically all of the difficult problems which came to the attention of this commission were biological problems. They are problems which can not be settled or solved offhand. They are problems which can be settled or which can be understood only through a series of careful observations; the time of the spawning of the different species of fishes, the food of the different species of food fishes, and I may say, and strangely, just what are the species of food fishes in the Great Lakes. They are not what they are said to be in the There is a discrepancy; there are several discrepancies, in fact. So that the problems which must be studied from now on, which will need to be studied in order to revise and revamp the statutes from time to time, as the international commission has authority to do, are problems of that character; and they will have to be taken up from year to year to keep the statutes up with the ever-changing conditions.

This, it seems to me, the taking over of the control of the fisheries on the Great Lakes by the federal governments—by the United States Government on our side, and the Dominion Government on the other side—is a great step, the greatest step that has ever been taken, I think, looking toward the proper conservation and the building up of the fisheries.

The terms of the treaty are numerous, and if they are carried out—and the governments are sure to do it, I think—we feel that the outlook for the fisheries in these international waters is more encouraging than it has ever been. Thank you. [Applause].

Mr. A. Kelly Evans (Canada). I would like to amplify something that Doctor

Evermann alluded to.

In speaking for the Province of Ontario, which virtually controls the major Canadian portion of the great inland fisheries, I should like to explain one point that Doctor Evermann has left out, as showing the great advantage accruing through this new

treaty, and the matter being left in the hands of the commission.

Unfortunately, it has been the practice in the past that persons at certain local points, governed by certain local political conditions, were able to place regulations upon the statute book which undoubtedly were very much against the conservation of the fisheries of the inland lakes. Having now placed the power in the hands of a commission, it will be impossible, for instance, for the local representative of one constituency to have his own way as has unfortunately often occurred. As an illustration, take a small body of water which it so happens occupies the position of the most favorable spawning ground for the fish of a very large body of water—for example, in Lake Ontario we have the Bay of Quinte, a small, narrow, land-locked bay in which most of the white fish of the entire lake spawn. At present some 300 or 400 net fishermen practically determine a member for a constituency there and have been able to dictate terms to that member. Now that this matter is placed in the hands of a commission, you will see that the member representing that one constituency will have but little or no power over the regulations governing the fisheries, etc., and consequently the net fishermen, for their own temporary, selfish interests, will not be able to dictate the policy governing the fisheries of the Great Lakes.

Unfortunately, the map that is exposed on the wall is rather broken off here [indicating] and it does not show a large portion of our Canadian fisheries to the right, and also owing to the coloration you hardly catch the immense coast line of these Great Lakes; but the coast line of the Great Lakes on our side in Ontario alone is much greater than your American coast on the New England seaboard. And these waters, which but a few years ago teemed with fish in masses that are almost unbelievable, at the present time have reached a point nearing depletion. In this smallest of the Great Lakes here, Ontario, but a few years ago as many as 90,000 whitefish have been taken in one haul with a net. To-day the whitefish fishery in this lake has practically ceased to exist; and I may say that the depletion of the whitefish of Lake Ontario is due very largely to the political influence of some 300 net fishermen in the little constituency of

Prince Edward County.

The same thing applies to other of our waters. That peninsula up there [indicating] in North Bruce is also the governing point of important breeding grounds for fish, and the net fishermen there can exercise direct political influence upon their member in parliament. The consequence is that in our country we have this anomaly, that to suit these local political exigencies actually we had an open season there [indicating] different from the open season here [indicating] and different from the open season there [indicating] and different from the open season there [indicating] and different from the open season there political weight to bear upon their member in parliament were enabled to have the fishing season extended into the dangerous breeding zone and otherwise, influence the fishery regulations. Now, fortunately, these men, when they come to Ottawa asking for certain favors for their own particular constituency, will be swamped; and we do feel—and I take great pleasure in amplifying what Professor Evermann has said—we

do feel that for the future we may expect that, largely through this treaty and through the work of this commission, the fisheries of the Great Lakes will be saved to posterity. [Applause.]

Mr. JOHN J. PEW (Massachusetts). Mr. President and fellow-delegates, having been interested in the fisheries from boyhood and having had many generations of my ancestors engaged in the same business, as a delegate from the largest fishing port in the United States I feel compelled to bring before this body the matter of beam trawling.

It is the question of beam trawling as now pursued. Several trawlers equipped with beam trawls have already been operating on the banks off the coast of New England, Nova Scotia, and Newfoundland. This method of fishing is looked upon with great alarm and anxiety by all the experienced fishermen of New England and Canada. as far as I am informed; not, as I believe, on account of any spirit of jealousy or on account of any temporary success that any of the beam trawlers may have achieved in the abovementioned waters, but on account of the catching of so many small fish, which after being taken are found too small for use and are then thrown back in the sea, thus destroying many millions of fish which in a few years if left alone would grow larger and assist in keeping up a continual supply of a catchable and profitable fish for commercial use.

Allow me here to cite an interview with a captain of a Gloucester vessel by a reporter of one of our Gloucester papers. Knowing the captain as I do, I can speak for his reliability and experience in regard to the deep-sea fisheries.

Captain Geel says the greatest menace to the fishery on the banks is the fleet of steam trawlers which have been sweeping over it this season. No one is more qualified to speak than this captain. He says that the damage these crafts are doing may not be apparent right away, but if continued will surely play out the banks as places for the usual method of fishing. Said he:

Why, you just imagine it! They sweep over the shoal spots steadily, dragging and hauling and setting, dragging, hauling, and setting that great trawl day and night, working two gangs. Now, they do not save any fish under 22 inches in length. They dump the contents of the trawl on deck, pick out the fish over this length, then open the big ports in the bulwarks and dump all the rest of the catch, dead, of course, back into the sea. I do not know what we can do about it; but you take my word for it, it means the beginning of the end of our valuable fisheries if something is not done soon.

Also allow me to cite an extract from a Boston paper of September 11 in regard to steam trawlers:

HALIFAX, NOVA SCOTIA, September 11.

Fishing by means of steam trawlers within the bays and harbors or within the 3-mile limit of Canada has been prohibited by an order in council passed by the Canadian government. The fishermen of Nova Scotia made strong protests to the government against the operation of trawlers, one of which, the W_{RR} , recently arrived from Scotland and was fishing out of Canso, Nova Scotia, manned by a crew of North Sea fishermen. This means of fishing is largely used in the North Sea, and as a beginning had been made to introduce it in the waters of Canada the government has taken prompt action to stop it. It is so effective that the above order had to be made to prevent the extermination or serious diminution of the fish supply.

In New England there is only one steam trawler engaged in the beam-trawl fishing, and I am informed it is the opinion of those interested in this vessel that this method is considered destructive to small fish and harmful to the best interests of the New England fisheries for the future.

I do not feel like going into a long argument about this method of fishing, but wish to call your attention to this matter and appeal to you whether it is not time for you to consider it in all of its bearings and take some action which will result in a speedy investigation of the whole matter, that will tend to some regulation or restriction by your respective governments, and be the means of saving millions of small fish from extermination, the loss of which would diminish the catch in the coming years and result in serious losses to all persons engaged in the fisheries.

The PRESIDENT. This opens up a very important matter that is new to America and old to Europe. Are there some who are well acquainted with the situation in the North Sea who will contribute? Doctor Hoek, is it well for us to attempt to secure any preventive methods at present?

Doctor HOEK. I hardly believe that.

The President. You hardly believe that? Must we wait until it gets a little more serious?

Doctor Hoek. Mr. President, in the North Sea they have been trawling now for such a long time, have they not? And the same complaints that just now have been brought forward have been put forth on twenty-five different occasions—on two hundred and fifty occasions. In several instances investigations have been made, and we have at the present moment an immense bulk of information, but hardly one of us dares to come forward with a conclusion, so difficult is the matter. It is so easy to say when a little fish is killed, "Oh, it is a pity," and when a large quantity of young fish is killed to say it should not be permitted; yet it is a very curious thing that taken as a whole the quantity of flatfish taken from the North Sea of late years, while it is diminished, is by no means (so far as statistical information goes) so greatly diminished as you would expect from the alarming communications we have had for several years already on that point. I hardly believe we are sufficiently prepared here to discuss this difficult problem, and so I should prefer not to go into the details of the question, Mr. President.

The President. We are very much obliged.

Mr. PAUL NORTH. Would it be possible to prevent the deep-sea trawling on the open seas—on the bank would it be a possibility?

The President. You have heard the question of Mr. North. Is anyone here

prepared to answer him?

Mr. Fryer. Mr. President, I must congratulate you upon your skill as an angler. I never saw a fly more adroitly thrown over any fish than the fly you threw over Doctor Hoek; and I must equally congratulate Doctor Hoek upon having disposed in five sentences of so vast a question as that of the use and the alleged abuse of the trawl. I would only add to what he said that you should not only throw your fly over Doctor Hoek, but that you should keep your eye upon the work that he and his colleagues in Europe have been doing in investigating this question of trawling, more particularly

in the North Sea.

Of all the fisheries problems, so far as the high seas are concerned, the problem which is attracting the attention of the great fishing powers on the other side of the Atlantic is with regard to the question of the trawl. I think the answer to the question, "Whether it is possible to pass laws prohibiting trawling?" is undoubtedly in the affirmative. It is perfectly possible to pass laws prohibiting trawling, and it is perfectly possible to enforce those laws within the territorial limits, provided you have got (I hope I am not treading on dangerous ground) a navy big enough to do it [laughter]; but to prohibit trawling in the extraterritorial waters, the waters in which international regulations are necessary, is quite another matter; and there, again, I would suggest that you watch very carefully the results of the investigations that have been conducted for the last seven years—investigations which some of the originators thought might have been brought to an end in less than half that period, but which they are recognizing must be carried on for a considerable period yet before even the answer to a single question can be given, namely, whether trawling is or is not detrimental.

Mr. C. H. Wilson (New York). I wanted to say that our Canadian friends have made a confession here, through their able advocate, Mr. Evans, of Ontario. I think it decidedly un-American that we of the United States should not come halfway in admitting the fact that the fisheries of the Great Lakes on the United States side show quite the same percentage of depletion as those of the Dominion of Canada. I speak by the book. Take the catch of whitefish alone on the Great Lakes, including St.

Clair. The report of 1880 shows a catch of 21,463,900 pounds. In 1903 the catch had dwindled to 3,813,259 pounds. In the State of Michigan the reports of its fisheries are as follows: The whitefish catch in 1891 was 8,110,000 pounds; in 1904 the catch was 4,197,000 pounds, and other varieties of food fish suffered a like loss during that period.

The question of international control of the waters contiguous to the United States and Canada is a question that has disturbed the heart and soul of the average American citizen in a painful manner. We have seen year by year the reduction of the catch of the various varieties of food fish in those lakes. Worse than that, we have seen

the continuous rise in the price of food-fish products, menacing the poor.

The settlement of this question is a consummation devoutly to be wished, not any more so by anyone than by the citizens of the State of New York. [Applause.]

Mr. HENRY HINRICHS (Pennsylvania). Regarding the decrease in the catches of fish on the Great Lakes, I regret very much that the gentleman who preceded me failed to take into consideration that last year (1907) and this year there was a phenomenal increase in the catches of whitefish. My home is Erie, Pa. I am interested in the fishing there. Whitefish were considered practically extinct. We did not deem it advisable, from a pecuniary point of view, to invest any money in fitting out nets for the purpose of catching whitefish. Last year and this spring, however, exceptional catches of whitefish have been made. The blue pike, another of the common-food fishes, were decidedly on the increase last year. Extremely heavy catches were made all along the south shore of Lake Erie. This year the herring, the most common fish that swims in the waters of the Great Lakes, have been found more abundant than ever in the history of fishing. There seems to be no end to them; and as far as the price to consumers is concerned, to which the distinguished gentleman referred, I wish to say that the scarcity of fish naturally affects the price. Owing to the heavy catches that have been made this year, at least on Lake Erie, the prices have been lower by from 50 to 75 per cent in some instances than in a great number of years.

Whether this phenomenal increase in the catch of food fishes on the Great Lakes is to be attributed to artificial propagation, or to the exceedingly warm weather of this summer, I am not sure. However, I believe that artificial propagation is perfectly

justified in laying claim to the phenomenal increase.

